Memorandum



To: House Judiciary Committee

From: Professor Ken Rumelt, Vermont Law School

Jon Groveman, Vermont Natural Resources Council

Re: Response to Industry 24 Point Proposed Amendment to S.37

Date: April 30, 2019

I. Introduction

The following is the response of the Vermont Natural Resources Council (VNRC) and the Vermont Law School (VLS) to the proposed amendment to S.37 submitted to the House Judiciary Committee by Warren Coleman and Trey Martin on behalf of certain industries on April 25, 2019. As detailed below, the industry proposed amendment and accompanying analysis includes misinterpretations of the law and proposals that would render the medical monitoring provisions ineffective.

As VNRC testified to last week, medical monitoring exists in 16 states. Despite what you have heard, the test for medical monitoring in S.37 is not materially different than the test that exists in other states. There is no one test for medical monitoring. There is no trajectory where medical monitoring cases are headed. Each court created a test based on the facts and circumstances of each case.

All states do not include the qualifying terms industry lobbyists are requesting. Moreover, a recent preliminary ruling in federal court in Vermont suggests a medical monitoring test that is less stringent than the test in S.37.¹

¹ See *Sullivan v. Saint-Gobain Performance Plastics Corporation*, Decision on Motion to Compel, Case No.5:16-cv-125 (9/13/17); "The plaintiffs must show:

[•] exposure to a potentially harmful substance;

[•] for which the defendant is liable under an accepted legal theory such as negligence, nuisance or strict liability;

[•] an increase in the risk of injury or disease caused by exposure;

[•] the availability of a monitoring program which is (1) different from the care provided to anyone who sees a doctor. regularly; and (2) useful for early identification of injury associated with exposure to the harmful substance.

S.37 contains several provisions that are more stringent than medical monitoring tests in other states and are not in favor of victims of toxic pollution who may need to seek a medical monitoring award in the courts. For example, under the bill medical monitoring will only apply if there is a release from a large facility. No state that allows medical monitoring limits the claim to releases from large facilities or includes exemptions from a medical monitoring cause of action. Accordingly, we believe it is inaccurate to describe S.37 as unfair and out of step with other states that allow medical monitoring cause of actions.

Below is our direct response to the analysis in the proposal submitted by industry lobbyists. As you will see, we do not oppose all of the language changes proposed by industry. However, we point out flaws in their analysis and oppose changes that will render the medical monitoring cause of action ineffective in allowing victims of toxic pollution to fairly seek medical monitoring when needed.

II. Response

(1) "Disease" means any disease, illness, ailment, or adverse physiological or chemical change linked with caused by exposure to a toxic substance.

These changes do not substantively alter the meaning of the term "disease" and, therefore, we do not oppose it. It makes most sense, however, to define the term "disease" without reference to any particular cause. A disease is a disease whether or not it is caused by exposure to a toxic substance. The issue of what causes an increased risk of developing a latent disease is dealt with in the elements of medical monitoring. We recommend modifying the definition to strike everything after the word "change."

(2) "Establishment" means any premises used for the purpose of carrying on or exercising any trade, business, profession, vocation, commercial or charitable activity, or governmental function.

Footnote 2 of Industry's redlined version of S.37 suggests the term "establishment" is not used elsewhere in the draft and should therefore be deleted. But that is not true. The term appears in the definition of "large facility." *See* 12 V.S.A. § 7201(5)(B)(ii) (defining "large facility" in reference to "establishments" under common ownership or control).

(3)(2) "Exposure" means ingestion, inhalation, contact with the skin or eyes, or any other physical contact or absorption through any body surface.

We do not object to the proposed change.

(4) (3) "Facility" means all contiguous land, structures, other appurtenances, and improvements on the land where toxic substances are manufactured, processed, used, or stored. A facility may consist of several treatment, storage, or disposal operational units. A facility shall not include land, structures, other appurtenances, and improvements on the

land owned by a municipality, <u>or owned or operated by a health care facility or health care provider as defined in section 9402 Title 18.</u>

We have not found any medical monitoring cases that exempt health care facilities or health care, nor did the redlined draft cite any.

- (5)(4) "Large facility" means a facility:
- (A) where 10 or more full-time employees have been employed at any one time; or
- (B)(i) where an activity within the Standard Industrial Classification code of 20 through 39 is conducted or was conducted; and
- (ii) that is owned or operated by a person who, when all facilities or establishments that the person owns or controls are aggregated, has employed 500 employees at any one time.

This definition is unchanged.

- (6) (5) "Medical monitoring" means a program of medical surveillance, including periodic medical tests or procedures examinations for the purpose of early diagnosis and treatment detection of signs or symptoms of a serious latent disease resulting from exposure to a toxic substance.
 - "medical tests or procedures" versus "medical examinations.

We object to excluding "tests and procedures" from the definition of medical monitoring. While we do not oppose the term "examinations" itself, alone it could be interpreted to exclude tests and procedures, which are often expensive for the patient, the insurer, or both (e.g. MRI or X-Ray). Removing "tests and procedures" also creates an inconsistency with the elements of medical monitoring. For example, plaintiffs in a medical monitoring suit would be required to prove that "medical tests or procedures" exist to detect the latent disease under both the original and industry version of S.37. We therefore recommend the original language to avoid this inconsistency.

Footnote 5 of the redlined version of the bill suggests the changes are meant to "harmonize" the definition of medical monitoring with the elements of a medical monitoring claim cited by courts "including the Ninth Circuit Court of Appeals, the Federal District Court for Colorado, as well as state courts in Pennsylvania, Florida, Massachusetts, Missouri, Utah and West Virginia.

Some of the cases use the term "examinations." But in each of those cases, as in S.37, it is clear that term includes testing and procedures. **Ninth Circuit**. To recover for medical monitoring under Guam law, plaintiffs must prove that "diagnostic medical examinations reasonably necessary" and that "**monitoring and testing procedures** exist which make the early detection and treatment of the disease In <u>Abuan v. Gen. Elec. Co.</u>, 3 F.3d 329,

334 (9th Cir. 1993) (citing <u>In re Paoli R.R. Yard PCB Litigation</u>), 916 F.2d 829, 852 (3d Cir. 1990) (emphasis added).

Colorado Federal District Court. *Cook v. Rockwell*, 755 F.Supp. 1468, 1477(D. Colo. 1991) is unclear on the precise elements of a medical monitoring claim. The decision references the elements from the Third Circuit <u>In re Paoli</u> decision, but does not clearly adopt them. Assuming the <u>In re Paoli</u> test applies, then like in <u>Abuan</u>, it should be clear that reference to "examinations" includes "monitoring and testing procedures" that must exist in order to recover.

The **Pennsylvania**, **Florida**, and **Massachusetts** cases do not use the term "medical examinations." The **Pennsylvania**, **Florida**, and **Massachusetts** cases do not use the term "medical examinations," but instead speak of a "monitoring procedure" and monitoring "regime," Redland Soccer Club v. Dep't of the Army, 696 A.2d 137, 145–6 (Pa. 1997) ("monitoring procedures"); Petito v. A.H. Robins Co., 750 So. 2d 103, 106–7 (Fla. Dist. Ct. App. 1999) ("monitoring procedure" and "monitoring regime"); Donovan v. Philip Morris USA, Inc., 914 N.E.2d 891, 902 (Mass. 2009) ("medical test" and "medical examinations").

The **Missouri** case <u>Meyer v. Fluor Corp.</u>, 220 S.W.3d 712, 718 n.7 (Mo. 2007) held that it was not necessary yet to "establish precisely what must be proven in order to recover medical monitoring damages."

The **Utah** case doesn't reference "examination" in its list of elements. <u>Hansen v.</u> <u>Mountain Fuel Supply Co.</u>, 858 P.2d 970, 979 (Utah 1993) ("medical test").

The **West Virginia** case speaks of both "diagnostic medical examinations" and "monitoring procedures." <u>Bower v. Westinghouse Elec. Corp.</u>, 522 S.E.2d 424, 432–33 (W.Va. 1999).

Consequently, there is no compelling need to exclude "tests and procedures" from the definition of "medical monitoring."

"early detection of signs or symptoms" versus "early diagnosis and treatment"

We do not object to the term diagnosis. Including the term "treatment" is problematic, however. First, the term "treatment" is not defined and may be interpreted wrongly to limit the availability of monitoring. For example, some states require proof that a "treatment" can "alter the course of the illness." Hansen, 858 P.2d at 979. Some diseases, however, may not respond to treatment. But just because a disease does not respond to treatment, does not mean early detection and diagnosis are unhelpful. Early diagnosis of an untreatable terminal illness is helpful even though it may not alter the course of the underlying disease. A person could get their financial and legal affairs in order. That a disease is not presently treatable, moreover, does not mean that it will remain untreatable. Medical science is always advancing—today's untreatable disease

may become treatable in a person's lifetime. Therefore, the definition of "medical monitoring" should not include the term "treatment."

Contrary to Industry's claim in footnote 5 of the draft, many of the jurisdictions cited do not require plaintiffs to prove the existence of a "treatment" for the latent disease: Redland Soccer Club, Inc., 696 A.2d at 195–6 (Pennsylvania state court); Petito, 750 So. 2d at 1-6–07 (Florida state court); and Bower, 522 S.E.2d at 433–4 (West Virginia). Indeed, Pennsylvania and West Virginia's highest courts *rejected* the notion that treatment must currently exist to obtain medical monitoring.

Notably here, while Industry advances a *definition* of medical monitoring to include the term "treatment," the actual *test* it advances does not. *See* § 7202 (industry proposal). The final bill should, therefore, should not use the term "treatment" in the definition of "medical monitoring" to ensure plaintiffs will not be denied medical monitoring in the absence of current treatment methods for an underlying latent disease.

• "latent disease" versus "serious latent disease"

We object to inserting the word "serious" into the definition or test for "medical monitoring." First, Industry offers no definition or test for determining when a disease is "serious." Upon further research, only one court defines the term "serious disease," and the definition is vague, potentially too restrictive, and unnecessary. Hansen, 858 P.2d at 979 (defining "serious disease" as "an illness that in its ordinary course may result in significant impairment or death."). This definition is vague because the term "significant" is not defined. In other words, the Utah Supreme Court defined a vague term with another vague term. Because the term "serious" is vague, it will lead to litigation (and related expenses) to determine some arbitrary level of "seriousness."

The vague concept of "seriousness" of a disease, moreover, is largely subsumed by S.37's existing test for medical monitoring. Namely, whether diagnostic testing is reasonably necessary. § 7202(a)(4) (S.37 as drafted). A jury can find that diagnostic testing is not "reasonably necessary" for a disease that seems like it's a mere trifle.

Additionally, there is some confusion in the case law regarding over the term "serious." In <u>Bower</u>, the **West Virginia Supreme Court** established a test for medical monitoring that included the phrase "serious latent disease." 522 S.E.2d at 432. However, in explaining the test, the court did not reference the need to prove the latent disease is "serious." Instead, it referenced the phrase "particular disease." *Id.* at 433.

(7) (6) "Person" means any individual; partnership; company; corporation; association; unincorporated association; joint venture; trust; municipality; the State of Vermont or any agency, department, or subdivision of the State; federal agency; or any other legal or commercial entity.

(8) "Release" means any intentional or unintentional, permitted or unpermitted, act or omission that allows a toxic substance to enter the air, land, surface water, or groundwater. or any other place where the toxic substance may be located.

The term "release" should remain defined unless it is not used in the final version of the bill.

(9) (7)(A) "Toxic substance" means any substance, mixture, or compound that has the capacity to produce cause personal injury or illness to humans through ingestion, inhalation, or absorption through any body surface and that satisfies one or more of the following:

This definition is acceptable. However, we recommend that the term "disease" replace the term "illness" to be consistent with the definitions and the usage of the term "disease" throughout S.37.

- (i) the substance, mixture, or compound is listed on the U.S. Environmental Protection Agency Consolidated List of Chemicals Subject to the Emergency Planning and Community Right-To-K-now Act, Comprehensive Environmental Response, Compensation and Liability Act, and Section 112(r) of the Clean Air Act;
- (ii) the substance, mixture, or compound is defined as a "hazardous material" under 10 V.S.A. § 6602 or under rules adopted under 10 V.S.A. chapter 159;
- (iii) testing has produced evidence, recognized by the National Institute for Occupational Safety and Health or the U.S. Environmental Protection Agency, that the substance, mixture, or compound poses acute or chronic health hazards;
- (iv) the Department of Health has issued a public health advisory for the substance, mixture, or compound; or
- (v) the Secretary of Natural Resources has designated the substance, mixture, or compound as a hazardous waste under 10 V.S.A. chapter 159; or
- (vi) exposure to the substance can be shown by expert testimony to increase the risk of developing a latent disease.

We strongly object to striking (9)(A)(vi) from the definition of "toxic substance." Industry suggests in footnote 8 that it did not find this element in any of the cases it reviewed. But that is unsurprising since <u>none</u> of the cases attempt to limit claims for medical monitoring to any particular list of toxic substances, including those in sections (9)(A)(i)–(v). Industry's redlined version of S.37 would be the <u>only</u> law in the country to limit medical monitoring claims when there is sufficient evidence to meet the elements of claim.

(B) "Toxic substance" shall not mean:

- (i) a pesticide regulated by the Secretary of Agriculture, Food and Markets; or
- (ii) ammunition or components thereof, firearms, air rifles, discharge of firearms or air rifles, or hunting or fishing equipment or components thereof.

§ 7202. MEDICAL MONITORING FOR EXPOSURE TO TOXIC SUBSTANCES

- (a) A person with or without a present injury or disease shall have a cause of action for the remedy of reasonable cost of medical monitoring when exposed to a toxic substance against a person who released a toxic substance from a large facility if that person proves all of the following are demonstrated by a preponderance of the evidence:
 - "with or without a present injury" versus "without a present injury"

We do not oppose this change. Those with a present injury resulting from exposure to a toxic substance may already obtain medical monitoring associated with their injury under traditional tort law.

• "remedy of medical monitoring" versus "reasonable cost of medical monitoring"

We object to this change because will limit a persons' ability to certify a case for medical monitoring as a class action. Class action law is complicated, but the "core" of a class action, as Justice Ginsburg remarked, "is to overcome the problem that small recoveries do not provide the incentive for any individual to bring a solo action prosecuting his or her rights." Amchem Prod., Inc. v. Windsor, 521 U.S. 591, 617 (1997). Medical monitoring claims are rarely (if ever) brought on behalf of an individual because the costs of bringing the claim far outweighs the award of damages for an individual plaintiff. They are also very much a community-wide public health claim. Therefore, a court's denial of class certification may sound the death knell of the medical monitoring claim.

To date, class action claims for injunctive relief have faced less resistance from the federal bench than those seeking monetary damages.² The first type of class can be certified under Rule 23(b)(2) of the Federal Rules of Civil Procedure (injunctive relief). A Rule 24(b)(3) class action for damages requires a more complex determination for purposes of class certification. Industry's suggestion would limit claims to the more complex Rule 24(b)(3) claims. We therefore oppose this limitation.

(1) The person was exposed to the toxic substance as a result of tortious conduct by the person who released the toxic substance the defendant's negligence,

We object to this change. The Industry draft misreads the cases and there's no reason provided why claims should be limited to negligence.

² Federal courts typically have jurisdiction over state law medical monitoring claims under the Class Action Fairness Act of 2005.

The Industry draft suggests the limiting medical monitoring to instances where defendants are "negligent," Industry suggests this is consistent with cases from a host of federal and state court jurisdictions. But this claim is not accurate.

Industry suggests that **California** state law limits medical monitoring to negligence claims. But they misread the case. California requires claims seeking recovery for fear of developing cancer be brought under negligence; <u>not</u> for medical monitoring. <u>Potter v. Firestone Tire & Rubber Co.</u>, 863 P.2d 795, 823 (1993) ("That medical monitoring may be called for as a result of a defendant's **tortious conduct**, even in the absence of physical injury, was compellingly demonstrated in [case].") (emphasis added). California further doesn't limit the elements to negligence claims. *Id.* at 824.

Several of the cases, moreover, did not involve trespass or nuisance claims. The courts, therefore, did not conclusively determine whether people can obtain medical monitoring via trespass, nuisance, or strict liability. See, e.g., Petito, 750 So.2d 103 (Fla. Ct. App. 3 Dist. 1999) (exposure to the drug Fen-Phen); Hansen, 858 P.2d 970 (Utah 1993) (claim by renovation workers against owner of office building for exposure during their work at the building).

Industry also suggests that **Colorado** state courts require a finding of negligence. However, we are aware of no Colorado appellate or supreme court case that establishes the elements of medical monitoring.

(2) There is a probable link between exposure to the toxic substance and a latent disease The exposure exceeded background levels and, where applicable, state and federal health standards or guidelines,

We agree that the "probable link" element should be deleted. But strongly oppose the inclusion of a requirement for proving an exceedance of "background levels" or "state and federal health standards or guidelines."

"background levels"

Industry suggests the "background" requirement is consistent with decisions from the Third Circuit Court of Appeals and state courts in Pennsylvania and Florida. But the **Third Circuit** case does not stand for the proposition that plaintiffs need to prove "background levels" in all cases. It notes the possibility that plaintiffs could prevail with proof that "everyone in the population had been exposed to substantial amounts of *defendants*' [toxins]." Brown v. SEPTA (In re Paoli R.R. Yard PCB Litig.), 113 F.3d 444, 461 (3d Cir. 1997) (emphasis in original). This prevents "the most egregious polluters, those who cause abnormally high degrees of contaminants to permeate an entire geographical area, do not escape medical monitoring liability by virtue of their own extraordinary malfeasance." *Id.* Notably, in that case, the plaintiffs offered "no proof that the background area in which they live[d] was generally exposed to a high level of defendants' contaminants" *Id.* Given the court's recognition of an exception, S.37 should not require proof of background in all medical monitoring cases.

The decisions that reference "background" are generally expressing concern over causation issues. It is important to remember that there are many ways to prove a defendant caused the plaintiffs' exposure. This may be done by comparing concentrations of the toxin in body tissue to a "background" level, by modeling emissions and uptake; by some combination of the two; or possibly other scientific means. Requiring plaintiffs to prove "background" levels is an unnecessary in each case, and therefore should not be a required element in all medical monitoring claims. Instead, defendants may raise the issue of "background" exposure to challenge the plaintiffs' evidence on a case-by-case basis.

• Requiring an exceedance of "state and federal health standards and guidelines"

We strongly oppose this proposed requirement as well. First, industry fails to cite any case law in support of this requirement. Second, there has been considerable testimony before this Committee regarding state and federal health standards. We support the existing version of S.37, which allows people to obtain medical monitoring when the facts warrant it. Industry's proposal would prevent people from obtaining medical monitoring unless and until a undefined state (presumably Vermont) or federal agency declares a health standard. The existing S.37 is consistent with tort law, which does not treat compliance with state or federal regulations as a shield to liability.

- (3) <u>As a proximate result of Tthe person's exposure to the toxic substance, there is a significant</u> increases <u>in</u> the risk of developing a <u>serious</u> latent disease, <u>A person does not need to prove that the latent disease is certain or likely to develop as a result of the exposure</u>.
 - Addition of the phrase "as a proximate result"

While we generally do not oppose including the phrase "as a proximate result," we believe it is unnecessary. The term "proximate" is not defined and may cause unnecessary confusion.

• "increases the risk" versus "there is a significant increase in the risk"

The **West Virginia** case *Bowers* doesn't define the term "significantly increased risk," but notes that "no particular level of quantification is necessary to satisfy this requirement." <u>Bower</u>, 522 S.E.2d at 433. Since there is no requirement for quantifying the amount of added risk, the question becomes whether the amount of exposure makes diagnostic testing reasonably necessary. This is ultimately a clinical judgment, and falls within the next element of medical monitoring in S.37. Adding the term "significant" here would only add ambiguity and lead to unnecessary litigation.

• "latent disease" versus "serious latent disease"

For reasons stated above, we object to the term "serious."

• striking the phrase "a person does not need to prove that the latent disease is certain or likely develop as a result of the exposure."

This is taken almost verbatim from <u>Bower</u>, 522 S.W.2d at 433 ("Again, the plaintiff is not required to show that a particular disease is certain or even likely to occur as a result of exposure.").

(4) Diagnostic testing is reasonably necessary. Testing is reasonably necessary if a physician would recommend testing for the purpose of detecting or monitoring a serious latent disease based on the person's exposure,

Industry suggests this should be stricken as unnecessary given changes to the requirements of medical monitoring elsewhere in their proposed draft. We disagree with those changes and therefore disagree with striking the language here.

(5) (4) Medical tests or procedures exist to detect the <u>serious</u> latent disease,

See our objection to including the term "serious," above.

(5) A physician prescribes such monitoring and it is different than what would be recommended in the absence of such an exposure, and

We oppose the language "physician prescribes." The standard should be "would prescribe." <u>Bowers</u>, 522 S.E.2d at 433. We also found no cases that use "physician prescribes" language.

Note that the court in <u>Bower</u> explains this issue in greater detail: "While there obviously must be some reasonable medical basis for undergoing diagnostic monitoring, factors such as financial cost and the frequency of testing should not be given significant weight. Moreover, the requirement that diagnostic testing must be medically advisable does not necessarily preclude the situation where such a determination is based, at least in part, upon the subjective desires of a plaintiff for information concerning the state of his or her health."

We do not object to the remaining language.

(6) The prescribed monitoring is reasonably necessary according to contemporary scientific principles.

This element is not necessary. The reliability of expert testimony is governed by Rule 702 of the Vermont Rules of Evidence, which provides: a qualified expert witness may testify if their testimony "will assist the trier of fact to understand the evidence or to determine a fact in issue" and "if (1) the testimony is based upon sufficient facts or data,

(2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case." Any expert opinion on the reasonableness of medical monitoring must satisfy this standard.

(b) A person's present or past health status shall not be an issue in a claim for medical monitoring.

We do not object to deleting this requirement. However, we remain concerned that a person's present or past health status not become grounds for a fishing expedition by defendants. We note that medical records often contain private and protected information wholly unrelated to a claim for medical monitoring. No person should be forced to give up this right to privacy for any matter they do not put at issue in a claim for medical monitoring.

(e) (b) If the cost of medical monitoring is awarded, a court shall order the defendant found liable person to pay that award to fund a court-supervised medical monitoring program fund administered by one or more health professionals a trustee.

We object to the first, third, and last proposed change. By inserting "the cost of," it may become more difficult to certify a medical monitoring class action for injunctive relief under Rule 23(b)(2) of the Federal Rules of Civil Procedure. *See above*. We also favor having a program run by health professionals rather than a trustee who is not a health professional.

(d) Upon an award of medical monitoring under subsection (e), the court shall award to the plaintiff reasonable attorney's fees and other litigation costs reasonably incurred.

We object to deleting the attorneys fee provision. First, we note that a class action settlement, including any award of fees, must be approved by the court as "fair." Second, without fee recovery, it will be difficult to find an attorney willing to bring a medical monitoring claim; particularly if the statute precludes a lump sum payment for prevailing parties. Typically, plaintiffs pay their attorneys via a contingency fee out of an award of damages. But S.37 does not authorize an award of damages. Rather, defendants fund a medical monitoring program. If S.37 passes without an attorney fee provision, then the only means of recovering fees would be through an exception to the general rule that attorneys fees are only available when expressly authorized by statute. See Robes v. Town of Hartford, 161 Vt. 187, 198–89 (1993)

(e) (c) Nothing in this chapter shall be deemed to preclude the pursuit of any other civil or injunctive remedy <u>or defense</u> available under statute or common law, including the right of any person to <u>seek to</u> recover for damages related to the manifestation of a latent disease. The remedies <u>and defenses</u> in this chapter are in addition to those provided by existing statutory or common law.

We do not object to these changes.

- (d) This section does not preclude a court from certifying a class action for the remedy of medical monitoring.
- (e) For the purpose of establishing whether a defendant is liable under Section 7202, compliance with a permit issued by any Federal, State or local permitting authority shall be admissible and prima facie evidence that a defendant met its duty of care with regard to the use, handling, storage, disposal or transport of a toxic substance consistent with standards established in the permit.

We object to this proposal. Defendants can always raise compliance with a state or federal permit as a defense. But tort law does not treat compliance as an absolute shield to liability or as a rebuttable presumption. Similarly, tort law does not treat violations of state or federal permits as absolute evidence of negligence (i.e. negligence "per se"). Both parties in a medical monitoring claim will be able to raise compliance history as part of their respective case. Industry's draft does not include any suggestion to the contrary.

Sec. 2. RETROACTIVITY

A claim for medical monitoring shall not be available if discovery of exposure to the toxic substance occurred before the Act's effective date.

We object to this proposal because it is unnecessary. Existing Vermont law governs retroactivity application of statutory amendments. 1 V.S.A. § 214(b). There is no need for clarification here.